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PATENT APPLICATION

ATTORNEY DOCKET NO. 10006963-1IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kevin Collins

Confirmation No.: 2456

Application No.: 09/919,090

Examiner: Pham, Hung Q.

Filing Date: July 31, 2001

Group Art Unit: 2168

Title: Storage Device Manager

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

## TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on April 18, 2006.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
\$450☐ 3rd Month  
\$1020☐ 4th Month  
\$1590☐ The extension fee has already been filed in this application.☒ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.Please charge to Deposit Account 08-2025 the sum of \$ 500. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, Alexandria, VA 22313-1450  
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☒ I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number (571)273-8300.Date of facsimile: May 25, 2006Typed Name: Jed CavenSignature: [Signature]

Respectfully submitted,

Kevin Collins

By: [Signature]

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Rev 10/05 (Apl/Brief)

**RECEIVED  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
	)	
Kevin Collins	)	Group Art Unit: 2168
	)	
Serial No.: 09/919,090	)	Examiner: Pham, Hung Q.
	)	
Filing Date: July 31, 2001	)	Confirmation No.: 2456
	)	
For: Storage Device Manager	)	

**APPEAL BRIEF**

To: Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in response to the final rejections of the claims mailed January 19, 2006 and maintained in the Advisory Action mailed March 31, 2006. A Notice of Appeal was filed on April 18, 2006.

**REAL PARTY IN INTEREST**

The assignee of the entire right, title, and interest in the patent application is Hewlett-Packard Development Company.

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### RELATED APPEALS AND INTERFERENCES

There are currently no related appeals of other United States patent applications known to Appellant, Appellant's legal representative, or the assignee that will directly affect, or be directly affected by, or have a bearing on, the Board's decision. There are currently no related interferences known to Appellants, Appellants' legal representative, or the assignee which will directly affect, or be directly affected by, or have a bearing on, the Board's decision.

### STATUS OF CLAIMS

Paragraph 7 of the Advisor Action mailed March 31, 2006 indicates that the claim amendments submitted in the Response to the Final Office Action will be entered. Thus, claims 30-33, 35-42, and 44-45 are pending in the application.

Claims 31, 37 and 41 stand rejected under 35 U.S.C. §112, first paragraph.

Claims 30, 31, 36 and 37 stand rejected as being anticipated under 35 U.S.C. §102(e) by, or in the alternative as being rendered obvious under 35 U.S.C. §103(a) in view of, U.S. Patent No. 6,647,415 to Olarig et al. (the '415 patent).

Claims 41, 42, and 44-48 stand rejected as being anticipated under 35 U.S.C. §102(e) by, or in the alternative as being rendered obvious under 35 U.S.C. §103(a) in view of, *Jamsa, 1001 Windows 98 Tips* ("Jamsa").

Claims 32-35, and 38-48 stand rejected under 35 U.S.C. §103(a) as being obvious under 35 U.S.C. §103(a) over the '415 patent in view of Jamsa.

**STATUS OF AMENDMENTS**

Claims 34 and 46-48 were cancelled in the Response to the Final Office Action. Paragraph 7 of the Advisor Action mailed March 31, 2006 indicates that the claim amendments submitted in the Response to the Final Office Action will be entered for purposes of this appeal.

### SUMMARY OF CLAIMED SUBJECT MATTER

The subject matter of the independent claims is summarized below with reference numerals and reference to the specification and drawings in accordance with 37 CFR §41.37.

#### Claim 30

Claim 30 is directed to method of managing storage space on a storage device (110, 111, 112) associated with a computer system (100). The method comprises:

    sorting a plurality of data files on the storage device (110, 111, 112) into one or more categories based on at least one characteristic of the data files; and

    reallocating a portion of the data (210, 220, 230) in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.

Claim 36

Claim 36 is directed to a computer program product comprising logic instructions recorded in a computer-readable medium which, when executed by a processor, configure the processor to:

sort a plurality of data files on a storage device (110, 111, 112) associated with the processor into one or more categories based on at least one characteristic of the data files; and

reallocate a portion of the data (210, 220, 230) in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.

Claim 41

Claim 41 is directed to an apparatus, comprising:

a processor ;

a storage device (110, 111, 112) communicatively connected to the processor;

a memory module comprising logic instructions recorded in a computer-readable medium which, when executed by a processor, configure the processor to:

performing an action when an amount of available storage capacity on the storage device (110, 111, 112) falls below a threshold, and, in response to the signal, to:

present, in a user interface (400), an indicia of an amount of data storage consumed by a category of data files and one or more reallocation operations applicable to a category of data files;

receive, from the user interface (400), a capacity threshold, a reallocation operation and a category of data files to which the reallocation operation is applicable; and

apply the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold.

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 31, 37, and 41 satisfy the requirements of 35 U.S.C. 112, first paragraph.
2. Whether claims 30 and 36 are anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 6,647,415 to Olarig et al. (the '415 patent).
3. Whether claims 30 and 36 are obvious under 35 U.S.C. §103(a) in view of U.S. Patent No. 6,647,415 to Olarig et al. (the '415 patent).
4. Whether claims 41, 42, and 44-48 are anticipated under 35 U.S.C. §102(e) by Jamsa ("1001 Windows 98 Tips").
5. Whether claims 41, 42, and 44-48 are obvious under 35 U.S.C. §103(a) in view of Jamsa ("1001 Windows 98 Tips").
6. Whether claims 32-35 and 38-48 are obvious under 35 U.S.C. §103(a) in view of U.S. Patent No. 6,647,415 to Olarig et al. (the '415 patent) in view of Jamsa ("1001 Windows 98 Tips").



## ARGUMENT

### I. Claims 31, 37, and 41 Comply with 35 U.S.C. §112, First Paragraph

Claims 31, 37, and 41 stand rejected under 35 U.S.C. §112, first paragraph based on the language “performing an action when an amount of available storage capacity on the storage device falls below a threshold.” This language was first rejected in the Office Action mailed April 28, 2005. However, the Examiner provided no specific reasoning or clarification regarding the rationale for the rejection until the Advisory Action mailed March 31, 2006, in which the Examiner specifically asserted the language “when an amount of available storage capacity on the storage device falls below a threshold” fails to satisfy the requirements of 35 U.S.C. §112, first paragraph. Applicant disagrees.

#### A. Legal Standard

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that *one skilled in the art* can reasonably conclude that the inventor had possession of the claimed invention. *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003). The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement; applicants are free to be their own lexicographer.

The examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the original disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976) (“[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention

defined by the claims.").

*B. One Skilled in the Art Would Reasonably Conclude that Applicant Possessed the Subject Matter Claimed in Claims 31, 37, and 41*

In the Advisory Action mailed The Examiner appears to assert that claims 31, 37, and 41 fail to satisfy the written description requirement because portions of the specification describes performing an action when an amount of available storage space meets or exceeds a threshold. The Examiner cites page 5, lines 1-19, page 7, lines 25-30, page 13, lines 19-29, and page 19, line 20-page 20, line 7 to support the assertion.

Applicant refers the Examiner to page 12, lines 10-27, which describe various thresholds that may be used in the system, and specifically to lines 24-25, which describe performing an action if the storage device capacity meets 95%, i.e., if the available capacity is 5%. In addition, lines 26-27 describe performing an action if the partition capacity is over 80%, i.e., if the available capacity is less than 20%. Based on this description, one skilled in the art would reasonably conclude that applicant possessed an embodiment of the invention in which an action is performed when an amount of available storage space falls below a threshold. To uphold the Examiner's position will require the Board to conclude that one skilled in the art of computer data management lacks training or skills in mathematics which are commonly possessed by grade-school children.

I. The '415 Patent Cannot Anticipate or Render Obvious Claims 30 and 36

A. Legal Standard for Anticipation

The standard for lack of novelty, that is, for anticipation, under 35 U.S.C. §102 is one of *strict identity*. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986). Invalidity for anticipation requires that all of the elements and limitations of the claims be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991). Every element of the claimed invention must be literally present, arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). “The *identical* invention must be shown in as complete detail as is contained in the patent claim.” MPEP §2131 (7<sup>th</sup> Ed. 1998) (citing *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). Furthermore, functional language, preambles, and language in “whereby,” “thereby,” and “adapted to” clauses cannot be disregarded. *Pac-Tec, Inc. v. Amerace Corp.*, 14 USPQ2d 1871 (Fed. Cir. 1990).

“It is by now well settled that the burden of establishing a *prima facie* case of anticipation resides with the Patent and Trademark Office.” *Ex parte Skinner*, 2 USPQ2d 1788, 1788-1789 (Bd. Pat. Int. 1986) (holding that examiner failed to establish *prima facie* case of anticipation). The examiner has “the burden of proof . . . to produce the factual basis for its rejection of an application under sections 102 or 103.” *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). Only if that burden is met, does the burden of going forward shift to the applicant.

A. Legal Standard for Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest *all* the claim limitations. (*See, MPEP 2143*). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, all words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

As with anticipation, the Examiner bears the burden of proof to provide a factual basis to support a rejection under 35 U.S.C. §103. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (quoting *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). Only if that burden is met, does the burden of going forward shift to the applicant.

*B. The '415 Patent Fails to Disclose or Suggest Elements Recited in Claims 30 and 36*

The '415 patent cannot anticipate (or render obvious) independent claims 30 and 36 because the '415 patent fails to disclose (or even to suggest) limitations recited in independent claims 30 and 36. Claim 30 recites "sorting a plurality of data files on the storage device into one or more categories based on at least one characteristic of the data files" and claim 36 recites "sort a plurality of data files on a storage device associated with the processor into one or more categories based on at least one characteristic of the data

files.”

The final Action asserts that the ‘415 patent discloses these limitations, and cites column 3, lines 6-11 and column 6, lines 42-44 to support the rejection. Applicant disagrees.

The cited text reads as follows:

FIG. 2 shows a flow chart of the transparent overflow storage process. Using any of various algorithms, each local workstation or PC periodically inspects the used capacity of its storage to determine whether some of the data stored on the PC needs to be moved to network storage (step 202).

It should also be noted that the disclosed innovative ideas are not limited only to Windows, DOS or UNIX systems, but can also be implemented in other operating systems.

Nothing in this text discloses (or even suggests) sorting a plurality of data files on the storage device into one or more categories based on at least one characteristic of the data files.

The final Action appears to assert that it is common knowledge that Windows 98 sorts Temporary Internet Files into one or more categories. Applicant traverses this rejection. The final Action provides *no factual basis whatsoever* to support the assertion.

Claim 30 further recites “reallocating a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold” and claim 36 recites “reallocate a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.” The Action asserts that the ‘415 patent discloses these limitations, and cites Fig. 2, step 206 and column 3, lines 10-24 to support the rejection. Applicant disagrees. The cited text reads as follows:

If a PC's storage space is nearing full capacity, the PC automatically determines which data has been least-recently used (step 204) and automatically moves such amount of data to the network server's storage so as to free up a previously determined percentage or magnitude of storage space on the PC, without notifying the user (step 206).

Note that the amount of storage in use above the threshold for moving data (i.e., the minimum available storage) need not be the same as the amount of

data moved. For example, a computer may be set to move data to network storage when there is less than 5% of storage free. When this threshold is reached, the machine will move enough data so as to free up 10% of storage.

Nothing in this text discloses (or even suggests) reallocating a portion of the data *in a category of data files* when a storage capacity consumed by the category of data files exceeds a threshold. This text appears to lack any reference whatsoever to applying thresholds to *categories* of data files. To the contrary, thresholds appear to be applied to entire disk drive capacities.

In sum, the '415 patent fails to disclose or suggest elements of claims 30 and 36, and therefore cannot render obvious independent claims 30 and 36.

## II. Jamsa Cannot Anticipate or Render Obvious Claims 41, 42, and 44-48

### A. Legal Standards for Anticipation and Obviousness

The legal standards for anticipation and obviousness are set forth above.

### B. Jamsa Fails to Disclose or Suggest Elements Recited in Claim 41

Jamsa cannot anticipate (or render obvious) independent claim 41 because Jamsa fails to disclose limitations recited in independent claim 41. Claim 41 recites a processor configured to “perform an action when an amount of available storage capacity on the storage device falls below a threshold.” The Action asserts that Jamsa describes this limitation, and cites tip 133 in Jamsa. Applicant disagrees. Tip 133 reads as follows:

Regardless of the amount of space their disk drives contain, users usually have no problem filling up their available space. After your disk fills, you will have to delete files that you no longer use to make room for new files.

To help you remove unnecessary files from your disk, Windows 98 provides the Disk Cleanup Wizard, which will help you delete unnecessary files from your disk. To start the Disk Cleanup Wizard from within the Explorer, perform these steps:

1. Click your mouse on the start menu Programs option and then select Windows Explorer. Windows 98, in turn, will start the Explorer.
2. Within the Explorer window, right-click your mouse on the disk drive from which you want the Disk Cleanup Wizard to remove unnecessary files. Windows 98 will display a pop-up menu.
3. Within the pop-up menu, click your mouse on the Properties option. The Explorer, in turn, will display the disk's Properties dialog box, as shown in Figure 133.1.
4. Within the properties dialog box, click your mouse on the Disk Cleanup button. Windows 98, in turn, will start the Disk Cleanup Wizard, as shown in Figure 133.2.
5. Within the Disk Cleanup Wizard, click your mouse on the checkboxes that correspond to the files you want the Wizard to delete, placing a check mark within the box. As you select the files you want to remove, the Wizard will display the amount of disk space you will recover.

6. Within the Disk Cleanup Wizard, click your mouse on the OK button. The Wizard, in turn, will display a dialog box asking you to confirm the file deletion.

Contrary to the assertion in the final Action, nothing in tip 33 discloses (or even suggests) a processor configured to perform an action when an amount of available storage capacity on the storage device falls below a threshold, as recited in claim 41. Moreover, there is *no factual basis whatsoever* in the record to support this assertion. Hence, Jamsa can neither anticipate nor render obvious claim 41.



III. The '415 Patent in Combination with Jamsa Cannot Render Obvious Claims 33 and 39

A. Legal Standard for Obviousness

The legal standards for obviousness is set forth above.

B. The '415 Patent, Alone or in Combination with Jamsa, Fails to Disclose or

Suggest Elements Recited in Claims 33 and 39

The '415 patent, alone or in combination with Jamsa, cannot render obvious claims 33 and 39 because claims 33 and 39 recite limitations neither disclosed nor suggested by the '415 patent or by Jamsa. Claims 33 and 30 each recite limitations directed to "receiving, from the user interface, a capacity threshold, a reallocation operation and a category of data files to which the reallocation operation is applicable; and applying the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold."

The Action asserts that the '415 patent discloses these limitations, and cites Fig. 2, step 206 and column 3, lines 10-16 to support the rejection. Applicant disagrees. The cited text reads as follows:

If a PC's storage space is nearing full capacity, the PC automatically determines which data has been least-recently used (step 204) and automatically moves such amount of data to the network server's storage so as to free up a previously determined percentage or magnitude of storage space on the PC, without notifying the user (step 206).

Nothing in this text discloses (or even suggests) reallocating a portion of the data *in a category of data files* when a storage capacity consumed by the category of data files exceeds a threshold. This text appears to lack any reference whatsoever to applying thresholds to *categories* of data files. To the contrary, thresholds appear to be applied to entire disk drive capacities.

In sum, the '415 patent, alone or in combination with Jamsa, fails to disclose or suggest elements of claims 33 and 39, and therefore cannot render obvious claims 33 and 39.

### CONCLUSIONS

The '415 patent, alone or in combination with Jamsa, fails to disclose or suggest each limitation of the pending claims. Therefore, neither the '415 patent, alone or in combination with Jamsa, cannot be used to establish the required *prima-facie* case of anticipation under 35 U.S.C. §102, or of obviousness under 35 U.S.C. §103. Appellants urge the Board to reverse the Examiner's rejections.

Respectfully submitted,

Jed W. Caven  
Caven & Aghevli LLC  
Attorney for Applicants

A handwritten signature in black ink, appearing to read 'Jed W. Caven', with a stylized, cursive script.

By:  
Jed W. Caven  
Registration No. 40,551  
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Date: May 25, 2006

## **APPENDIX A**

### **Claims**

30. A method of managing storage space on a storage device associated with a computer system, comprising:

    sorting a plurality of data files on the storage device into one or more categories based on at least one characteristic of the data files; and

    reallocating a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.

31. The method of claim 30, further comprising:

    performing an action when an amount of available storage capacity on the storage device falls below a threshold.

32. The method of claim 30, further comprising:

    presenting, in a user interface, an indicia of an amount of data storage consumed by a category of data files; and

    presenting, in the user interface, one or more reallocation operations applicable to a category of data files.

33. The method of claim 32, further comprising:

    receiving, from the user interface, a capacity threshold, a reallocation operation and a category of data files to which the reallocation operation is applicable; and

    applying the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold.

34. (Canceled).

35. The method of claim 30, wherein sorting a plurality of data files on the storage device into one or more categories based on at least one characteristic of the data files comprises sorting files in a file allocation table based on a file extension associated with the file.

36. A computer program product comprising logic instructions recorded in a computer-readable medium which, when executed by a processor, configure the processor to:

sort a plurality of data files on a storage device associated with the processor into one or more categories based on at least one characteristic of the data files; and

reallocate a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.

37. The computer program product of claim 36, further comprising logic instructions which, when executed by a processor, configure the processor to perform an action when an amount of available storage capacity on the storage device falls below a threshold.

38. The computer program product of claim 36, further comprising logic instructions which, when executed by a processor, configure the processor to:

present, in a user interface, an indicia of an amount of data storage consumed by a category of data files; and

present, in the user interface, one more reallocation operations applicable to a category of data files.

39. The computer program product of claim 38, further comprising logic instructions which, when executed by a processor, configure the processor to:

receive, from the user interface, a capacity threshold, a reallocation operation and a category of data files to which the reallocation operation is applicable; and

apply the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold.

40. The computer program product of claim 38, further comprising logic instructions which, when executed by a processor, configure the processor to perform an operation selected from the group of operations consisting of deleting a file, compressing a file, moving a file, and archiving a file.

41. An apparatus, comprising:

a processor;  
a storage device communicatively connected to the processor;  
a memory module comprising logic instructions recorded in a computer-readable medium which, when executed by a processor, configure the processor to:  
perform an action when an amount of available storage capacity on the storage device falls below a threshold and to;  
present, in a user interface, an indicia of an amount of data storage consumed by a category of data files and one or more reallocation operations applicable to a category of data files;  
receive, from the user interface, a capacity threshold, a reallocation operation and a category of data files to which the reallocation operation is applicable; and  
apply the reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding the capacity threshold.

42. The apparatus of claim 41, wherein the memory module further comprises logic instructions which, when executed by a processor, configure the processor to:  
sort a plurality of data files on the storage device associated into one or more categories based on at least one characteristic of the data files; and  
reallocate a portion of the data in a category of data files when a storage capacity consumed by the category of data files exceeds a threshold.

43. Canceled.

44. The apparatus of claim 42, wherein the memory module further comprises logic instructions which, when executed by a processor, configure the processor to:  
monitor a storage capacity consumed by a category of data files; and  
apply a reallocation operation to the category of data files when the category of data files consumes an amount of storage exceeding a capacity threshold.

45. The apparatus of claim 41, wherein the memory module further comprises logic

instructions which, when executed by a processor, configure the processor to perform an operation selected from the group of operations consisting of deleting a file, compressing a file, moving a file, and archiving a file.